

# HOSPITAL MANAGEMENT SYSTEM DOCUMENTATION

## INTRODUCTION :

The Hospital Management System is a Java-based application designed to streamline patient management, doctor management, and appointment booking within a hospital setting. The system leverages JDBC (Java Database Connectivity) to interact with a MySQL database, allowing seamless storage and retrieval of patient and doctor information.

## FEATURES :

1. **Patient Management:** Allows the addition of new patients, viewing existing patient records, and searching for patients by ID.
2. **Doctor Management:** Facilitates the viewing of doctor profiles, including their names and specializations.
3. **Appointment Booking:** Enables the booking of appointments between patients and doctors, ensuring efficient scheduling within the hospital.

## FILE STRUCTURE :

The project consists of the following Java files :

1. **Patient.java:** Defines the Patient class responsible for managing patient-related operations such as adding patients, viewing patient records, and searching for patients by ID.
2. **Doctor.java:** Contains the Doctor class, which handles doctor-related functionalities such as viewing doctor profiles and checking doctor availability.
3. **HospitalManagementSystem.java:** The main entry point of the application, orchestrating user interactions and integrating patient, doctor, and appointment functionalities.

## **IMPLEMENTATION DETAILS :**

### **PATIENT MANAGEMENT :**

The “patient class” encapsulates methods for managing patient data. It includes functions for adding new patients to the database, retrieving patient records, and validating patient IDs.

### **DOCTOR MANAGEMENT :**

In the “Doctor class”, functionalities related to doctor management are implemented. This includes viewing doctor profiles and checking doctor availability for appointments.

### **APPOINTMENT BOOKING :**

The “HospitalManagementSystem class” orchestrates the booking of appointments between patients and doctors. It integrates patient and doctor functionalities to facilitate appointment scheduling and ensures that appointments are booked efficiently.

## **DATABASE CONNECTIVITY :**

The application connects to a MySQL database using JDBC. The database schema includes tables for storing patient information, doctor details, and appointment records. The system leverages prepared statements to execute SQL queries securely and efficiently.

## **DEVELOPMENT ENVIRONMENT :**

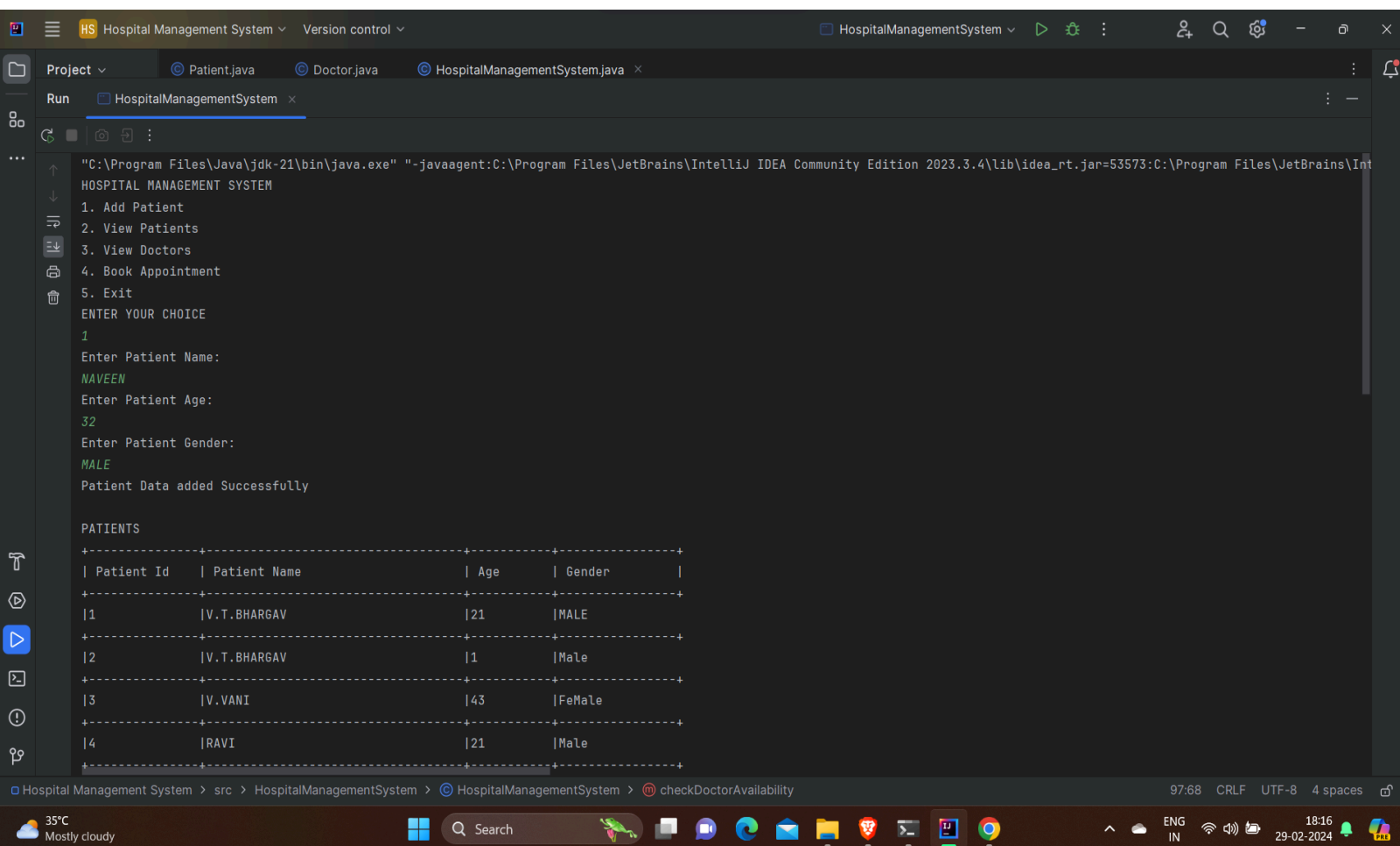
The project was developed using IntelliJ IDEA, a powerful integrated development environment for Java development. IntelliJ IDEA provides advanced features such as code completion, refactoring, and debugging, enhancing developer productivity.

## EXTERNAL LIBRARIES :

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## CONCLUSION :

The Hospital Management System offers a comprehensive solution for managing hospital operations, including patient management, doctor profiles, and appointment scheduling. Its intuitive interface, robust database connectivity, and integration with external libraries make it an ideal choice for hospitals seeking to streamline their administrative processes.



```
"C:\Program Files\Java\jdk-21\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2023.3.4\lib\idea_rt.jar=53573:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2023.3.4\bin" -Dfile.encoding=UTF-8
HOSPITAL MANAGEMENT SYSTEM
1. Add Patient
2. View Patients
3. View Doctors
4. Book Appointment
5. Exit
ENTER YOUR CHOICE
1
Enter Patient Name:
NAVEEN
Enter Patient Age:
32
Enter Patient Gender:
MALE
Patient Data added Successfully

PATIENTS
+-----+-----+-----+-----+
| Patient Id | Patient Name | Age | Gender |
+-----+-----+-----+-----+
| 1 | V.T.BHARGAV | 21 | MALE |
+-----+-----+-----+-----+
| 2 | V.T.BHARGAV | 1 | MaLe |
+-----+-----+-----+-----+
| 3 | V.VANI | 43 | FeMaLe |
+-----+-----+-----+-----+
| 4 | RAVI | 21 | MaLe |
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Hospital Management System > src > HospitalManagementSystem > HospitalManagementSystem > checkDoctorAvailability 97:68 CRLF UTF-8 4 spaces

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